USING DATA COMPRESSION TO ACHIEVE LOWER LINEAR
BIT DENSITIES ON A STORAGE MEDIUM

5   **Abstract of the Disclosure**

Method and apparatus for transferring data to and from a data storage medium, such as a rotatable disc in a data storage device. The medium includes a data sector field with a physical length sufficient to store a first data block at a first write frequency. A compression engine compresses the first data block to provide

10   a reduced size, compressed data block. The compressed data block is then written to the data sector field at a second write frequency less than the first write frequency so that the written compressed data block occupies substantially the physical length of said data sector field. This achieves a decreased linear bit density and tends to increase communication channel signal to noise (SNR) ratios

15   and reduce error rates. Data slipping is further advantageously employed so that the first data block further stores at least a portion of a second compressed data block.